sclerosed and inflamed patches in the gray axis, and in one case of lupus erythematosus, symmetrical patches, visible to the naked eye, in the central lateral portion of the anterior horns, the same locality as was affected in the already-mentioned case of herpes iris.

HYDROPHOBIA.—MM. Bertholle and Eloy send the account of a carefully observed and reported case of hydrophobia in the human subject in *L' Union Médicale*, Aug. 11, with the following conclusions :

1. The existence of hydrophobia in our patient is incontestable. The incubation of about forty days had a duration confirmable to the statistics resulting from the observations collected by the Conseil d' Hygiène of 1862-1874. Death occurred rapidly about forty-eight hours after the beginning of the hydrophobic spasms.

2. Erections, ejaculations, and dysuria were the first symptoms of irritation of the nervous centres. These early phenomena, in the absence of any other clinical indication, might lead to error, since they occurred at a period of the disease in which the existence of genetic disorders had not been noticed by authors. Here the excitation of the genito-urinary organs was the first manifestation of spinal irritation, preceding thus the other classic phenomena of hydrophobia.

3. The generalization of cadaveric rigidity, its prompt appearance, and the quickness with which putrefaction set in, are phenomena analogous to those observed in physiological experiments. They confirm the numerous observations made now many months in the laboratory of experimental medicine of the College de France, by which M. Brown-Séquard has shown that cadaveric rigidity and putrefaction appear the more quickly as the death was preceded by longer and more violent convulsions. These phenomena are therefore in relation, not with the hydrophobic intoxication, but with the duration of the convulsive spasms.

4. The dark coloration and the diminution of the fluidity of the blood are proofs that in this case death was not due to asphyxia. Indeed, in cases of asphyxia the blood is fluid and presents no increase in its consistency. Our observation therefore confirms the statement to that effect made by Dr. Calve, of Toulon (*Union Médicale*, Dec. 30, 1876).

The existence of pulmonary ecchymoses in hydrophobia is also in confirmation of a physiological phenomenon observed by various authors and studied with care by Dr. Henocque (*Gaz. Hebdom.*, 1880, Nov., 1, 2, and 3). In cases of lesions of the nervous centres, these ecchymoses are met with in the tissues of various organs (stomach, intestines, bladder, liver, etc.) ; but they occur habitually in the pulmonary substance, as in the present case. The bloody appearance of the tracheal form is probably caused by the mingling of these extravasations with the bronchial mucus.

The pulmonary emphysema often observed in hydrophobia, probably occurs subsequent to death. It is produced by an analogous mechanism to that of the *post-mortem* emphysema studied some time ago by M. Henocque, especially in cases of violent death and lesions of the nerve centres.

The anatomical differences between the contraction of the right and left halves of the diaphragm are similar to those observed in animals following a nervous irritation on only one side of the body. It was precisely this result in certain previous physiological experiments, as yet unpublished, of which we were witnesses, that led one of us to seek for and ascertain these differences in the autopsy of our patient.

En résumé, the excitation of the cord, localized, in the beginning, in the centres of innervation of the genito-urinary organs, was the first act of this pathological drama. But, so far as we are aware, genesic disorders have never before been observed in the prodromic period of hydrophobia. They have been observed in an advanced stage of the disease. Such, for example, was the case in the patient of Van Swieten, whose death was preceded by ejaculations, and of whom he wrote "*Semen et animam simul efflavit.*"

The respiratory disorders, the pulmonary ecchymoses, the differences in the state of contracture of the two halves of the diaphragm, the condition of the blood, are signs of a death by syncope, rather than by asphyxia, and are related to the physiological phenomena observed in animals (guinea-pig, dog, rabbit, ape), following irritations at a distance or direct injuries of the medulla. These facts, moreover, appear to be related to the numerous successes obtained in Germany and in France by M. Pasteur in the inoculations practised on dogs with the tissue of the medulla itself taken from other rabid dogs. Therefore we wait with some impatience the result of experiments by M. Pasteur with inoculations with the bulbar tissue of our patient. This will, if successful, be an authentic case, if not the first one, of the direct transmission of rabies from men to the lower animals, and a great step in the experimental study of hydrophobia.

INJURIES OF THE BRAIN, WITH GENERAL AND WITH LOCAL SYMPTOMS.—E. v. Bergmann, *Volkm. Klin. Vorträge*, No. 190, (abstr. in *Deutsche Med. Wochenschr.*, No. 35, Aug. 27). The author first, in this valuable clinical lecture, directs himself against the former sharp distinction of cerebral shock and cerebral compression. As he has repeatedly stated in former papers, the general symptoms observed in both of these traumatic conditions are referable to a more or less considerable disturbance of nutrition of the whole brain, which, according to the irritability of the various sections of the brain, reveals itself in paralytic or irritative phenomena. The cortex is earliest affected in all cases, the centres situated in the medulla (vaso-motor and vagus centres) are implicated later. Slight concussion causes only a transitory confusion resulting from shock to the nerve elements, or a vaso-motor disturbance of the surface of the brain ; a more severe one has, as a consequence, more lasting benumbing of the faculties and retardation of the pulse, with irregularity of the respiration from a more pronounced paralysis of the cortex, and with it irritation of the automatic centres in the medulla. A still severer shock produces quickening, weakening, and smallness of the pulse, together with deep coma in consequence of paralysis of the central organs involved. A compression of the brain from extravasation of blood between it and the dura, when slight, may cause also only a moderate, transient benumbing of the faculties, but when more extensive, causes more lasting unconsciousness, with sopor and slow pulse, and later, coma with small, rapid pulse. The cortical paralysis which asserts itself variously from mere confusion to the most profound coma, is in the first case the result of nutritive disturbances in the nervous elements, accompanied later by vaso-motor disorder or capillary hemorrhages in the cortex ; in the second case the coma is the result of anæmia caused by the increasing pressure having a great extension over the cortex, inhibiting and destroying the function of the nerve elements. The same cause affects the automatic organs, first causing irritation and then their paralysis. Any distinction between the phenomena of cerebral shock and cerebral compression is only afforded by the order in time and the duration of the symptoms. In cerebral shock the symptoms are of early occurrence, and, in favorable cases, early in